



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/758,779

01/16/2004

David B. Small

9968-23U1

6327

570

7590

07/31/2008

PANITCH SCHWARZE BELISARIO & NADEL LLP  
ONE COMMERCE SQUARE  
2005 MARKET STREET, SUITE 2200  
PHILADELPHIA, PA 19103

EXAMINER

HADIZONOOZ, BANAFSHEH

ART UNIT

PAPER NUMBER

3714

MAIL DATE

DELIVERY MODE

07/31/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/758,779	<b>Applicant(s)</b> SMALL ET AL.	
	<b>Examiner</b> Banafsheh Hadizonooz	<b>Art Unit</b> 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Detailed Action***

In response to the amendment filed on 01/30/2008, claims 1-32 are pending in this application. Claims 29-32 have been added. This office action is made **Non-Final**.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-12, 14-17, 29, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sims (US 6,657,616 B2) in view of Ohara et al. (US 5,485,176).**

[Claim 1, 14]: Sims discloses a system comprising a frequency scanning circuit; a control circuit (e.g. microprocessor) in communication with the signal scanning circuit (e.g. RF signal receiver and transmitter), and AC/DC converter (See Col.4, 49-57), wherein the system is configured to detect a human finger when the finger enters the RF field (See Abstract and Col.1-53-Col.2, 36). Sims does not specifically disclose a memory in communication with the control circuit and an audible output device. Ohara discloses an information display system comprising a matrix of conductive lines(See Fig.3) wherein upon selection of an indicia by a user the audio outputs associated with said indicia is retrieved from the memory and outputted through a speaker (See Abstract and fig. 1). Therefore, it would have been integrate the electronic reading book

of the Sims invention with the technology disclosed in Sims in order to design a interactive learning system for children.

[Claim 2, 3,15]: Regarding claims 2 and 3, Sims further discloses a RF scanning circuit comprising a RF oscillator (See Col.3, 62-64) wherein an RF signal is input into the specific horizontal conductive line according to a predetermined input sequence, wherein the RF signals are then received from the specific conductive line and is outputted according to a predetermined output sequence, and wherein an oscillator generates the RF signals that is input into the specific conductive line (See Figure 1 element 24 (conductive lines) and Col.Col.3, 64- Col.4, 13).

[Claims 4, 5]: Regarding claims 4 and 5, The RF scanning circuit of Sims invention further comprises an input/output switching device (e.g. multiplexer) which routes the RF signal generated by the RF oscillator to each of the conductive lines according to the predetermined sequence, and is in communication with the control circuit (e.g. processor) and the conductive lines (See Col.2, 32-36).

[Claims 6-9, 17 and 29]: Regarding claims 6 and 9 Sims further discloses a filtering circuit (See Col.4, 49-56). Sims does not specifically disclose a bandpass filter. However such filter is well known in the industry and it would have been obvious to one having ordinary skill in the art to use such filter depending on the application.

Regarding claim 7, the system of Sims invention discloses the amplified and filtered coupled RF signals that are AC voltage sine wave signals (See Col.4, 37-57).

With respect to claims 8, and 17, Sims teaches amplifying and filtering the coupled RF signal and Ac to DC converter (See Col.4, 49-57).

[Claims 10- and 13]: With respect to claims 10 and 11, Sims discloses that the RF signal has a frequency of 100 KHz (See Col.3, 62-64). Sims does not specifically disclose the amplitude of 18 VAC. However, such limitations are well known and are considered obvious design choice.

Regarding claim 12, Ohara discloses that the column and row conductive lines are separated by an insulative sheet. See Figure 2, element 52.

Regarding claim 13, Inoue discloses a controller (e.g. CPU). Inoue does not specifically disclose a microcontroller, but this is an inherent feature of a CPU controller. See Col.1, 36-40.

[Claims 16]: Regarding claim 16, Sims further teaches analyzing one or more electrical characteristics of the coupled RF signal after an RF signal is input into all of the column conductive lines (See Claim 17).

[Claims 30-32]: Regarding claim 30, Sims discloses inputting predetermined RF frequencies into the conductive lines and outputting a RF signal at the predetermined frequency (See Col.3, 56-Col.4, 13). Sims further discloses that the memory stores the received RF signals from the conductive lines and control circuit (e.g. processor) and uses the values as a base line to compare with the signals that are received later (See Col.4, 58-64).

**Claims 13, 18 and 19 are rejected under 35 U.S.C 103(a) as being unpatentable over Sims (US 6,657,616) in view of Ohara et al. (US 5,485,176) further in view of Inoue et al (5,831,600) .**

Regarding claim 13, Sims discloses a controller (e.g. processor) (See Fig. 1, element 11). Sims does not disclose a microcontroller. Inoue discloses a coordinate input device comprising a computer and CPU, which inherently includes a microcontroller (See Fig.1, element 22). Therefore it would have been obvious to one of ordinary skill to upgrade the system of Sims to include a computer and microcontroller for better performance.

Regarding claims 18 and 19 Inoue discloses a matrix of conductive lines that are arranged horizontally with a preferred orientation, wherein the control circuit is configured to configure and analyze a single human finger presence among a plurality of possible human finger presences detected by the scanning circuit. See Figure 6, Col.7, 27-38.

**Claims 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sims (US 6,657,616) in view of Ohara (US 5485176) and further in view of Mulligan et al. (US 2003/0103043).**

[Claims 20, 21, 23-26 and 28]: Sims discloses a system comprising a frequency scanning circuit; a control circuit (e.g. microprocessor) in communication with the signal scanning circuit (e.g. RF signal receiver and transmitter), and AC/DC converter (See Col.4, 49-57), wherein the system is configured to detect a human finger when the finger enters the RF field (See Abstract and Col.1-53-Col.2, 36). Sims does not

specifically disclose a memory in communication with the control circuit and an audible output device. Ohara discloses an information display system comprising a matrix of conductive lines(See Fig.3) wherein upon selection of an indicia by a user the audio outputs associated with said indicia is retrieved from the memory and outputted through a speaker (See Abstract and fig. 1). Therefore, it would have been integrate the electronic reading book of the Sims invention with the technology disclosed in Sims in order to design a interactive learning system for children.

Sims also does not specifically disclose a control circuit to detect and select among the plurality of human fingers. However, Mulligan discloses a method for locating and distguishing a touch on a touch screen, wherein the touch sensitive pad is capable of detecting the presence of multiple fingers and make a selection based on signals magnitude (See P.3, [0040] and Fig. 3-5 and P. 4, [0066]. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the features of Mulligan's invention into the system and method of Sims/Ohara in order to design a system with better touch display capabilities.

[Claims 22 and 27]: Regarding claims 22 and 27, Ohara discloses an interactive book that retrieves audible messages from memory in response to selection of indicia (See Abstract and fig.1). Ohara does not specifically teach providing instructions to the user. However, since Ohara's system is directed to children, it would have been obvious to include some sort of instruction to direct the child to the next action because such addition would have been considered a matter of design choice.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Banafsheh Hadizonooz whose telephone number is 571-272-1242. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272- 6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BH

4/9/2007

/Robert E Pezzuto/  
Supervisory Patent Examiner, Art Unit 3714